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TITLE: Evaluation of Dynamic Motion X-Ray in Musculoskeletal
Pathology

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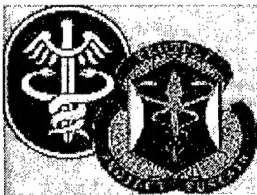
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MidTerm Overall Evaluation Report



PROPOSAL: 2000000038

TITLE: Evaluation of Dynamic Motion X-ray in Musculoskeletal Pathology

ACCOMPLISHMENTS

The purpose of this proposal is to evaluate the capability of a new imaging technology Dynamic Motion X-ray (DMX) to improve diagnostic accuracy, clinical decision making, and ultimately improved quality of care for individuals with musculoskeletal pathology. The DMX systems were ordered on 5 MAR 01, however, delivery of the 2 systems (AMEDD C&S and BAMC) did not occur until 5 DEC 01. During the time we were awaiting equipment delivery we had one clinical investigation protocol approved and a second protocol nearing completion. The first protocol will be evaluating the clinical effectiveness of the DMX system (Aim 2). Cineradiography has been suggested as an effective tool for diagnosing shoulder instability. However, this imaging tool is used sparingly in studies for diagnosis and evaluation of shoulder pathologies and to our knowledge has not been used to assess pathologic motion patterns in patients suffering from shoulder impingement syndrome. This project will compare the specific effects of selected shoulder muscle fatigue on glenohumeral migration in subjects with and without shoulder impingement syndrome. An additional project supporting Aim 2 will examine spinal motion patterns in individuals suffering from chronic spinal pain. Furthermore, we will evaluate the DMX teleradiology capability in terms of transmission speed, picture quality, and clinician ease of use (Aim 1).

PI's Accomplishment Evaluation: : Project completed with no problems/issues

PROBLEMS

The DMX systems were ordered on 5 MAR 01, however, delivery of the 2 systems (AMEDD C&S and BAMC) did not occur until 5 DEC 01. This lengthy backorder occurred despite constant prodding by the PI to the contracting office and the vendor to get the equipment. In addition, the digital conversion software package has not been installed by the vendor. This is to occur within the next 2 weeks. Therefore, the project timeline has been delayed approximately 8 months.

PI's Problem Area Evaluation: : Project encountered some problem/issues

LIFE-CYCLE

We anticipate the completion of the project over the next 8 months. We will perform evaluation of the systems using 1 cadaveric protocol and 2 human use protocols which will provide data for systematic evaluation of the technology. In addition, clinicians involved in musculoskeletal care will be surveyed on the perceived usefulness of the technology in the clinical setting.

PI's Life-Cycle Evaluation: : Project encountered some problem/issues

DELIVERABLES

Due to the extended delay in the equipment delivery the project is behind schedule by approximately 6 months. However, the aims of the proposals remain unchanged.

PI's Deliverables Evaluation: : *Not Submitted - under Review*

Expenditures

Element of Resource (EOR)	1ST Quarter Oct 1 - Dec 31	2nd Quarter Jan 1 - Mar 31
Travel 2100	\$0.00	\$0.00
Shipping 2200	\$0.00	\$0.00
Rent & Communications 2200	\$0.00	\$0.00
Contract for Services 2500	\$6,000.00	\$6,000.00
Supplies 2600	\$0.00	\$0.00
Equipment 3100	\$0.00	\$176,960.00

Financial Narrative:

To date funds have been obligated for the two DMX systems, software, and training. The funds have been obligated but not spent for the data manager. This will be used during FY02 as data is captured.

PI's Financial Evaluation: : *Not Submitted - under Review*

*** END OF REPORT ***